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Letter dated 11 July 2013 from the Permanent Representative of the United Republic of Tanzania to the United Nations addressed to the President of the Economic and Social Council

I have the honour to request that the report on the regional preparatory meeting for Africa on the theme "Innovation as enabler for the achievement of the Millennium Development Goals and sustainable development" be circulated as a document of the Economic and Social Council for consideration at its substantive session of 2013, under agenda item 2 (b) (see annex). The meeting was held in Dar es Salaam, United Republic of Tanzania, on 14 March 2013 in preparation for the annual ministerial review of the Council.

At the regional preparatory meeting, the challenges linked to ensuring that innovation is an enabler for sustainable development in the region were examined as a contribution to the theme of the 2013 annual ministerial review, "Science, technology and innovation, and the potential of culture, for promoting sustainable development and achieving the Millennium Development Goals". The Government of the United Republic of Tanzania believes that the report will constitute a valuable contribution to the discussions to be held in Geneva in July.

(*Signed*) Tuvako N. **Manongi**
Ambassador
Permanent Representative

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Annex to the letter dated 11 July 2013 from the Permanent Representative of the United Republic of Tanzania to the United Nations addressed to the President of the Economic and Social Council

Report on the regional preparatory meeting for Africa, prepared as a contribution to the annual ministerial review of 2013 of the Economic and Social Council

Summary

Ahead of the annual ministerial review of 2013 of the Economic and Social Council, a regional preparatory meeting on the theme "Innovation as enabler for the achievement of the Millennium Development Goals and sustainable development" was held in Dar es Salaam, United Republic of Tanzania, on 14 March 2013. At the annual ministerial review, participants will focus on the role of science, technology and innovation, and the potential for culture, in promoting sustainable development and achieving the Millennium Development Goals. The regional preparatory meeting for Africa was hosted by the Government of the United Republic of Tanzania, in cooperation with the World Intellectual Property Organization and the Department of Economic and Social Affairs of the Secretariat.

The meeting brought together a diverse group of regional stakeholders, including national policymakers and representatives of local governments, multilateral institutions, donors, civil society and the private sector, to identify trends and challenges in science, technology and innovation and discuss policy and targeted interventions for fostering innovation in the region.

Key policy messages

Innovation is a critical enabler for the achievement of the Millennium Development Goals and sustainable development

- Greater innovation throughout Africa would be the surest means of overcoming the technological, social, economic and environmental challenges associated with achieving the Millennium Development Goals.
- The transition to sustainable development will be highly dependent on the use of innovative technologies. Science, technology and innovation would also be effective for ensuring the balanced integration of the three dimensions of sustainable development.
- Science, technology and innovation should form an integral part of the post-2015 development framework.
- Stronger partnerships among stakeholders in all sectors are necessary to promote innovation as a means of achieving the Millennium Development Goals and sustainable development.

There is a need for Governments to create and nurture an "ecosystem for innovation" — a comprehensive, enabling environment for innovation

- A sound policy framework at the national and regional levels is needed to fully enable the development of innovative capacities.
- Close collaboration is needed among universities, Governments and industries to nurture innovation with a view to increasing economic productivity; partnerships among Governments, the private sector and civil society too are needed.
- Countries should ensure high-quality education and targeted investment in human resources, as these are the primary sources of innovation in all societies.
- Governments should provide financial, fiscal and regulatory incentives for activities that foster development and innovation. Such incentives should be aligned with appropriate regulatory frameworks and intellectual property rights that foster innovation and development.

Regional measures to facilitate the transfer of ideas can help build capacity and reduce current imbalances in innovation and development in the African region

- Regional support measures can include fostering regional linkages and partnerships among different stakeholders to capitalize on cross-border cooperation.
- Young people can be important innovators, yet many young innovators in the African region are not associated with institutions or universities. They must be better integrated in the innovation process.

Cultivating global support for African efforts to promote science, technology and investment for achieving the Millennium Development Goals and sustainable development is essential

- The Economic and Social Council should recognize the needs of African countries and issue a strong call for a coordinated approach to support Africa's endeavours to build innovation infrastructure and the capacities necessary to create domestic technology solutions.
- The Economic and Social Council must emphasize the contribution that science, technology and innovation can make to achieving sustainable development, particularly in the context of the post-2015 development framework.
- The Economic and Social Council could play an important role in galvanizing action for Africa's sustainable development. The ministerial declaration of the Council to be issued in July should include a strong call for supporting Africa's endeavours to build the innovation infrastructure and the capacity to create domestic technology solutions.

I. Introduction

1. In July 2013, the Economic and Social Council will hold its seventh annual ministerial review in Geneva. At the review, participants will focus on "Science, technology and innovation, and the potential of culture, for promoting sustainable development and achieving the Millennium Development Goals".

2. Ahead of the annual ministerial review, a regional preparatory meeting for Africa, organized by the Department of Economic and Social Affairs of the Secretariat and the World Intellectual Property Organization (WIPO) in cooperation with the Japan Patent Office, was held on 14 March 2013. The meeting was hosted by the Government of the United Republic of Tanzania.

3. The meeting brought together a diverse group of nearly 100 regional stakeholders from Governments, civil society, the private sector and the United Nations system to discuss how the promotion of enhanced science, technology and innovation policies and targeted interventions could promote progress towards the achievement of the Millennium Development Goals and ensure sustainable development throughout Africa. The meeting provided an important opportunity for African countries to contribute to the annual ministerial review, including by sharing best practices and lessons learned during three round-table discussions.

II. Proceedings of the regional preparatory meeting

A. Welcoming remarks

4. The meeting was opened by Alberic Kacou, United Nations Resident Coordinator in the United Republic of Tanzania, who emphasized that science, technology and innovation could play a critical role in the achievement of each and every Millennium Development Goal. Focusing on science, technology and innovation presented an opportunity to follow up on the outcome of the United Nations Conference on Sustainable Development, held in Rio de Janeiro, Brazil, in 2012, which focused significantly on green technologies. Technological advancements could also be a critical way to face the new development challenges of the post-2015 period. In that regard, there was a need to make more progress in building capacity on intellectual property issues for developing countries. Mr. Kacou stressed that intellectual property should be regarded as a development issue and that it must be included in any discussion on innovation, as intellectual property captured the value of innovation and converted ideas into tradable assets.

5. Francis Gurry, WIPO Director General, said that there was widespread consciousness of the importance of innovation. Innovation was a primary component of economic growth and a source of jobs, increased productivity and brought about material improvements in people's lives. He added that there were many policies that, together, created an effective innovation ecosystem and that intellectual property was a critical element of that ecosystem. Intellectual property brought technology to the market, making a saleable commodity accessible. It could also be a source of controversy because of access issues, as demonstrated by those advocating for Internet content to be free and open or for technology to be more accessible so as to reduce disease and poverty. Mr. Gurry said that one of the objectives of intellectual property policy was to find a point of optimum benefit by

balancing the different and competing interests of producers, consumers and society as a whole. Intellectual property was closely linked to innovation, which was key to economic success and a source of solutions to social challenges. Promoting capacities to innovate should be part of the post-2015 development agenda, and development partners should become true beneficiaries of innovation.

6. Toshihiro Kose, Director General of the Trademark, Design and Administrative Affairs Department of the Japan Patent Office, which is part of the Ministry of Economy, Trade and Industry of Japan, stressed that strong innovation systems were key to development in Africa and achieving the Millennium Development Goals. He explained that the objectives of the WIPO/Japan fund-in-trust for Africa and least developed countries were to raise people's awareness of the importance of intellectual property systems and the benefits resulting from their effective use; provide assistance in establishing and strengthening intellectual property laws and institutions in the targeted countries; and assist in the development of human resources in sectors involved in the administration and utilization of the intellectual property system, while working in close collaboration with regional communities throughout Africa. Other activities of the fund included the holding of seminars on human resources development, the provision of fellowships for future leaders and the organization of training programmes in Tokyo for participants from African countries. Mr. Kose highlighted that the Fifth Tokyo International Conference on African Development, to be held from 1 to 3 June 2013, would provide an opportunity to discuss specific action plans.

B. Opening session: science, technology and innovation, and the potential of culture, for promoting sustainable development and achieving the Millennium Development Goals

7. Néstor Osorio, President of the Economic and Social Council and Permanent Representative of Colombia to the United Nations in New York, emphasized the importance of innovation in creating healthy, educated and inclusive societies, as well as the fundamental role of innovation in the three pillars of sustainable development and in achieving the Millennium Development Goals. He acknowledged the rich cultural heritage of Africa and the unexploited potential of its people and resources. He also highlighted the importance of ensuring that economic growth coincided with the well-being of current and future generations through actionable sustainable development goals, as acknowledged by world leaders at the United Nations Conference on Sustainable Development. Mr. Osorio added that innovation in Africa had resulted in improvements in the lives of many people through advances in services, for example with regard to the expansion of mobile banking, and in public health, through collaborative research undertaken between medical institutions and Governments. Remarkable progress had been achieved throughout Africa in terms of science, technology and innovation, but there were still many challenges that needed to be addressed. Greater efforts were needed to build partnerships among the international community to promote and spread sustainable development in Africa. The impact of other challenges could be mitigated through better financial and human resources investments and by sharing best practices and lessons learned. Through the Economic Commission for Africa, the Economic and Social Council supported the implementation of regional policies for technology dissemination and innovation in Africa.

8. Wu Hongbo, Under-Secretary-General for Economic and Social Affairs and Secretary-General for the Third International Conference on Small Island Developing States, highlighted that profound social and economic changes had taken place owing to science, technology and innovation. Innovations helped to break down barriers and bridge gaps, as demonstrated by the impact of mobile technologies in Africa. Infrastructure was unevenly distributed, however, and more needed to be done to increase universal and affordable access to modern technologies. Technological progress was an important factor in achieving development goals, including the Millennium Development Goals, and sustainable development required a balance between policy and science, technology and innovation. Green technologies were essential and the objective of achieving energy for all must become a reality. Innovations in the health sector were key to ensuring the proper treatment of illnesses. Food security required major advancements in the development and application of agricultural innovation. Education was essential for innovation. Children must be encouraged to create and innovate from a young age. Science education and advancing digital literacy should be an integral part of education curricula. Increased investments and partnerships in research and development were important, as were complementary policy frameworks for developing, financing and marketing innovation. It was important to view innovation as a system with global, regional, national and subnational dimensions. Designing policies that integrated those dimensions and were tailored to specific national and local contexts should become an objective of the international community, which should engage in global collaboration.

C. Round table 1: innovation as enabler for the achievement of the Millennium Development Goals and sustainable development

9. The round table was moderated by Makame Mbarawa, Minister for Communication, Science and Technology of the United Republic of Tanzania.

10. Margaret Kamar, Minister for Higher Education, Science and Technology of Kenya, said that addressing challenges related to the Millennium Development Goals in Africa would require the development and use of science, technology and innovation. She also said that Kenya had adopted a national framework for innovation as part of its revised Constitution of 2010, in which intellectual property was mentioned for the first time, and its national long-term blueprint, "Kenya Vision 2030". Ms. Kamar explained that the framework included the creation of public and private universities and research institutions, promoted partnerships and investments in innovation in the private sector and focused on the protection of intellectual property. She added that Kenya had used innovation to address the Millennium Development Goals and sustainable development. It had established a national science, technology and innovation fund in 2008 to fund research and innovation that had supported prototypes, projects to commercialization and innovations in the areas of agriculture and information and communications technology. Kenya had also created three new institutions to promote science, technology and innovation, including by establishing specialized innovation centres, financing technological innovations and increasing awareness of intellectual property rights. Ms. Kamar noted that there were several young innovators in Kenya who were not linked to higher education and that providing support to those innovators was an issue to be addressed.

11. Barthelemy Nyasse, Professor at the Laboratory of Medicinal Chemistry in the Faculty of Science of the University of Yaoundé, said that there were many examples in Africa of good intentions to promote innovation. He added that although innovation must be promoted through all sectors in a collaborative manner, the necessary frameworks for innovation were not always in place. In addition, many innovation-related services were being provided to those in higher education despite the fact that much innovation came from people not associated with higher education. He emphasized that this problem needed to be fixed. He said that sometimes there was no leadership for innovation in Africa, which resulted in the lack of a clear vision and an inability to set priorities. Mr. Nyasse cited Botswana and Kenya as good examples of countries with clear priorities. In many other countries, the priority (the "what") was identified but there was a problem of implementation (the "how"). He highlighted the need for greater synergy between ministries and stakeholders to avoid operating in isolation and said that currently in many countries innovation was emerging from an unorganized system. While national policy frameworks were important, it was also necessary to have regional and international policy networks. He cited African Network for Drugs and Diagnostics Innovation, the Forum for Agricultural Research in Africa and the African Adaptation Research Centre as good examples of regional networks.

12. Padma Gehl Sampath, Chief of the Science and Technology Section in the United Nations Conference on Trade and Development (UNCTAD), said that there were three essential elements of science, technology and innovation that needed addressing: technology had a public goods dimension, for example with regard to facilitating access to medicine, food and knowledge; technology and innovation were essential to private enterprise development; and technology and innovation had a critical development dimension in terms of narrowing social and economic development gaps. Ms. Gehl Sampath emphasized that a well-functioning innovation ecosystem was not only about agencies and laws but that incentives too were critical. In addressing how innovation could enable development in Africa, three sets of issues were critical: (a) the technological divide must be bridged by expanding access to technologies, including by harnessing intellectual property rights for development goals and promoting inclusive innovation; (b) the structural vulnerabilities of African countries must be reduced through financing for innovation (such financing, which would come not only from national resources but also from the international community, was urgent and important for the post-2015 development agenda); and (c) collaboration and alliances across and within sectors should be promoted through existing means and partnerships, as well as through new means, particularly South-South cooperation. While South-South cooperation was important, in its *Technology and Innovation Report 2012*, UNCTAD argued that the South could complement but not replace the efforts of developed countries to help address technology and innovation issues in a comprehensive way.

13. Jon Gosier, Founder of Appfrica, said that his enterprise, which had been established in Uganda in 2008, was operating in 16 African countries, identifying young innovators and providing them with support. Appfrica (from "applications for Africa"), had formed partnerships with several private sector companies, the United States Department of State and the World Bank. It supported the innovative capacities of youth and encouraged young people to solve problems by creating mobile applications that address social problems. Mr. Gosier explained that the type of capital that was available mattered: the movement of capital from Governments

could be slow, while from the private sector it was generally quicker. Appfrica, a for-profit company aiming to have a positive social impact, worked to address that issue. Mr. Gosier also said that intellectual property rights were essential. He emphasized that most young innovators and their small companies, however, did not have the means to hire lawyers in multiple countries, which limited their ability to expand in other countries and protect their intellectual property rights and interests. It was therefore necessary to facilitate the protection of intellectual property rights.

14. Participants engaged in a wide-ranging discussion that covered several issues. Some participants requested more information and clarification regarding the Kenyan example and the functions of that country's new institutions in promoting science, technology and innovation. Other participants stressed that the lack of an African perspective in research and development and in science, technology and innovation frameworks had to be addressed, emphasizing that it was important for African countries to set their own priorities and identify sources of resources that would allow them to address those issues from their own point of view, not from that of outside donors. While some participants emphasized that countries lacked the resources necessary to establish an enabling environment for science, technology and innovation and needed additional resources, others stated that perhaps the larger issue was that Governments did not prioritize science, technology and innovation. The protection of intellectual property rights was seen as important and the view was expressed that efforts must be made to support young innovators. It was recognized that protecting intellectual property rights in the area of software was difficult but not impossible.

15. Education and training were emphasized by many as being key to promoting science, technology and innovation. Several participants called for the current educational systems to be reformed to give more emphasis to science education, including at a young age; provide more and better incentives to study science and engineering; develop educational and training structures that were less rigid and better emphasized practical knowledge and applications; and implement more robust and relevant opportunities for training in science, technology and innovation. It was also recognized that there were many young or "hidden" innovators not associated with universities. It was important to identify such innovators, for example through open innovation competitions, and establish a specific framework outside of the university system by which to support them.

D. Round table 2: local knowledge, innovation and sustainable development — country case studies

16. The round table was chaired by McLean Sibanda, Chief Executive Officer of The Innovation Hub, South Africa.

17. Ita-Okon Bassey Ewa, Minister for Science and Technology of Nigeria, spoke about his country's national innovation system and its use of the "triple helix approach". This model ensures that Governments, industries, universities and research institutions assume some of each other's capabilities while maintaining their own primary roles and responsibility. Mr. Ewa said that Nigeria had instituted a review of its science, technology and innovation policy, which had been approved in 2012. A new legal framework was being developed and the Government had inaugurated the National Research and Innovation Fund, with the President as Chair.

The Fund would be involved in facilitating innovations at the federal, sectoral, regional, state and local levels. Mr. Ewo also said that Nigeria's new national system of innovation aimed to redefine innovations so as to go beyond research and development and to facilitate a platform of innovative solutions that would lead to inclusive growth for the people. He stressed that the new innovation system sought to strengthen entrepreneurship and focused on the key economic drivers that would ensure sustainability, durability and quality. He gave examples of areas where the development of technologies, in particular biotechnology, infrastructure, energy, space, natural medicine and food science, among others, was a priority. He also referred to some of the successes Nigeria had achieved. For example, it had increased the level of indigenous knowledge and innovation, as reflected by the number of technology incubation centres established and the number of patents registered.

18. Nadia Zakhary, Minister of Scientific Research of Egypt, spoke about the importance of scientific research in Egypt and mentioned the increasing number of patents filed in that country from 1999 to 2011. She stated that, in order to achieve sustainable development in the region, greater interaction was required between businesses, industry, universities and polytechnics. Capacities for selecting, absorbing and integrating the major technological transfers through direct investment should be improved, to enable the build-up of endogenous scientific and technological strength. Ms. Zakhary cautioned against the heavy reliance on Government-funded research. Another important aspect she touched upon was the need for Egypt to design science, technology and innovation policies and programmes that had a more direct impact on society and the economy. She stated that Egypt's innovation system was built on three pillars: (a) a higher-education system; (b) research and development; and (c) support from Government and the private sector. She emphasized that currently the level of transfer of technology from research and development institutions to the private sector and enterprises was low. She stated that it would be important for Egypt to undertake a number of reforms in the education sector and to do more to incentivize research and introduce laws that would facilitate the application of scientific research. Ms. Zakhary also spoke about some of the success stories in Egypt, such as the molecular biology project conducted by the Ministry of Scientific Research and the city of scientific research and technology in Alexandria.

19. Drissa Diallo, Professor in the Department of Traditional Medicine of the National Institute for Public Health Research of Mali, spoke about the efforts made by his country since 1968 to add value to traditional medicines and be a driver of development. He said that the Department of Traditional Medicine employed approximately 40 people who formed part of the Ministry of Education and the Ministry of Health. In addition, the Institute served as a postgraduate training centre. Mr. Diallo also said that Mali had created associations to spur the cultivation of traditional medicinal plants and specialized pharmacies and doctors that were developing improved traditional medicines. He mentioned that the Institute also focused on standardizing traditional medicines to improve quality and on allowing producers to improve the presentation of the medicines, which was part of the process of adding value. To support those activities, the Institute received funds from the sale of medicines, partnerships and the Government. Mr. Diallo also mentioned some of the challenges; in particular the need to improve products, enable researchers to benefit from their work and create an environment that was more supportive of innovation.

20. George Owusu Essegby, Director of the Science and Technology Policy Research Institute at the Council for Scientific and Industrial Research in Ghana, said that the informal economy was an important contributor to the gross domestic product (GDP) and to employment in Africa. He cited the case of Ghana, where a project was being carried out to explore innovation in herbal medicines in the informal sector. The initial findings of the project indicated that public policies were vital for enhancing innovation in the informal economy and that a tested analytical framework was needed for promoting innovation in the informal as well as the formal economy. Mr. Essegby stressed the importance for appropriation mechanisms to be tailored to the specific contexts of the countries in which they were being implemented.

21. Participants raised several questions in response to the presentations by the panellists. In particular, several participants expressed interest in further discussing how knowledge-sharing in the informal sector could be improved. They noted that past experiences had often faltered because of the reluctance of traditional knowledge holders to share their expertise. It was noted that this was a process requiring significant commitment over time, to enable trust and transparency to be built. In addition, the benefits of knowledge-sharing for all involved needed to be demonstrated in order to elicit cooperation.

22. Other participants expressed interest in the idea of creating dedicated funding sources for supporting science and innovation but noted that doing so could be challenging. Panellists emphasized that before creating a fund it was important to have clarity on the issues preventing investment so that funding could be better targeted. It was also noted that while the private sector contributed to funds, there were difficulties impeding collaboration between the private sector and the scientific community that went beyond the issue of funding and that needed to be addressed. One of the panellists said that there were numerous opportunities for raising funds from external sources and that it would be important to improve access to information on those opportunities and understanding of the requirements.

E. Round table 3: key policy messages for the annual ministerial review of 2013 of the Economic and Social Council

23. The round table was chaired by Mr. Wu, Under-Secretary-General for Economic and Social Affairs and Secretary-General for the Third International Conference on Small Island Developing States.

24. Mr. Ewa, Minister for Science and Technology of Nigeria, presented several items with the aim of providing policy direction. He said that it was important to establish a culture of innovation at all levels of government, including by forming linkages among local, national, subregional, regional and international groups. He added that it was also important to promote e-science, technology and entrepreneurship, particularly in education, health and research and development. Youth and women should be encouraged to become involved in science, technology and innovation, for example through scholarships. He recommended that science, technology and innovation parks and museums be created to promote development in that area and to establish African "silicon valleys". Other crucial components included the establishment of science, technology and innovation budgeting and financing frameworks and technology promotion networks to promote intellectual

property rights and innovation at the national, subregional and regional levels. Such networks could be utilized to foster partnerships between African and multilateral stakeholders. Finally, Mr. Ewa recommended focusing on special projects with clear objectives, on topics such as space, solar technology, water resources and coastal management.

25. Ms. Kamar highlighted next steps for an improved regional approach to foster innovation in Africa. She recommended establishing a regional innovation fund for East Africa with assistance from development partners. Existing regional organizations should be strengthened. Good practices from east and south-east Asia, as well as the BRIC countries (Brazil, Russian Federation, India and China), should be identified, learned, adapted and adopted in African countries. Competitions should be organized to reward the best innovations in the region. Incubation hubs should be developed to nurture innovation through public-private partnerships. National and regional policies should be developed to provide an enabling environment, for example through tax incentives, so as to encourage venture capitalists to engage in innovation and the private sector to participate in research. Ms. Kamar recommended that Governments increase their spending on research and development to a minimum of 1 per cent of GDP. Awareness of intellectual property issues should be raised and incorporated into the education curriculum. In addition, Governments should not be the only ones to benefit from having intellectual property offices; higher-education institutions too could have their own such offices to guide, monitor and apply research developments and provide incentives to attract and retain researchers. Finally, Governments should work closely with international partners to enhance capacity and ease access to scientific and technological information.

26. Bruno Jean Richard Itoua, Minister of Scientific Research of the Congo and President of the African Ministerial Council on Science and Technology, provided an overview of the opportunities and challenges that African countries had faced in their development since independence. Despite its wealth of resources, the African continent had a complex development history that included fragile States, cycles of conflict, a lack of infrastructure, poverty and debt. In the past, funding for development had been inadequate and education and science, technology and innovation had not been priorities. Despite persistent challenges, however, stability had been established and Africa was experiencing increased growth, development and investment. In order to continue on a positive path, it was crucial for African countries to identify a fair and inclusive role for innovation for development. Innovation needed to be valued as a pillar of development (currently that was not the case), and innovators needed to be encouraged and supported. A significant challenge lay in promoting innovation through higher education and, at the same time, among people not associated with institutions of higher education, such as those working in small businesses. He emphasized that Africa required a culture of innovation. Its leaders needed to define a vision and integrate it into national and regional strategies on science, technology and innovation, and intellectual property needed to be given its due as a major key to a successful culture of innovation and development.

27. Participants posed questions about the panellists' statements on sharing human resources within the African continent. They noted that barriers to the sharing of human resources existed, and that this in turn became a barrier to the sharing of innovations. The panellists acknowledged the challenges. One recommendation put

forward was to collectively establish a strategy for resource sharing, in particular with regard to sharing experts and their knowledge. It was stressed that training was key and that more resources must be invested in creating training opportunities and enhancing capacities. A panellist emphasized that innovation was not an activity that could be engaged in exclusively by people holding doctorates or master's degrees — anyone could contribute to innovation. Education systems must be changed in appropriate ways to promote and emphasize innovation, such as through an efficient scholarship system. African countries must be cautioned against competing with respect to the number of PhDs awarded. There were serious problems that needed innovative solutions, and it was the solutions that needed to be encouraged and emphasized. Cooperation aimed at finding solutions was needed, not competition. Another panellist emphasized that countries should support each other by sharing resources as a matter of priority. African countries should identify their priorities and capacity-building needs and then identify other countries within the African region with whom they could share resources.

28. In closing the session, Mr. Wu reviewed and highlighted some of the key policy messages for the annual ministerial review of 2013 that had emerged from the many discussions:

(a) There was a need to create an enabling environment that was conducive to innovation. That required a sound policy framework at both the national and regional levels, closer cross-sector collaboration, high-quality education, targeted human resources investment and financial, fiscal and regulatory incentives with adequate intellectual property rights;

(b) Innovation was seen as the most important enabler in Africa for the achievement of the Millennium Development Goals and sustainable development, and enhanced innovation in Africa would be the surest way to overcome the technological, social and economic challenges to the achievement of the Goals;

(c) Global support was needed for Africa's efforts to promote science, technology and innovation. The Economic and Social Council should recognize that need and call for increased support for building the necessary innovation infrastructure and capacity in Africa. The Council must also emphasize the important contribution that science, technology and innovation can make to achieving sustainable development, particularly in relation to the post-2015 development framework.

F. Closing session

29. Mr. Osorio, President of the Economic and Social Council and Permanent Representative of Colombia to the United Nations in New York, highlighted a few key points raised at the meeting including: the relevance of innovation to the achievement of the Millennium Development Goals, the post-2015 development agenda and sustainable development; Africa's potential and the need to address the continent's limited resources; the role of youth and the recognition that not all potential innovators are associated with institutions or universities; and financing for innovation and defining priorities and establishing clear policies and partnerships between Governments, the private sector and civil society. Mr. Osorio said that three conditions had to be met for more effective science, technology and innovation systems to be developed at a national level: policy frameworks and

institutional capacity; financial, fiscal and regulatory incentives, along with the establishment of adequate intellectual property rights; and policy measures to promote collaboration and partnerships across a broad range of stakeholders. Regional measures to facilitate the transfer of ideas could help build capacity and reduce current imbalances in innovation and development in the African region. The Economic and Social Council intended to build on this event at the global level to ensure stronger partnerships with Africa to support an effective use of science, technology and innovation for sustainable development. Mr. Osorio encouraged participants to remain engaged with the work of the Council beyond the regional preparatory meeting and invited them to attend the annual ministerial review, to be held in Geneva in July.

30. Geoffrey Onyeama, WIPO Deputy Director General for Cooperation for Development, used the example of bilateral and plurilateral trade agreements to illustrate that African countries were at a disadvantage in terms of bargaining power. The multilateral system and framework, however, offered much more to developing countries and the fact that there was a large number of developing countries meant that they could have a greater impact when bargaining on international agreements. Mr. Onyeama said that he was encouraged by the fact that in the context of the annual ministerial review it was possible for a multilateral framework for sustainable development to be a central issue in the areas of intellectual property and innovation; he also said that that was a very important and concrete step. He added that innovation allowed creativity to reach the marketplace and that intellectual property made that possible. He cited several main challenges, such as the importance for African countries to put in place appropriate innovation and intellectual property strategies, a balanced regulatory framework to create an enabling environment, an institutional framework, capacity-building opportunities and government funding for research and development. He emphasized that it was important that innovation be used as a tool for sustainable development and for making progress on the Millennium Development Goals and that innovation and intellectual property be placed on the global agenda with a view to achieving sustainable development.

31. Hassan Mshinda, Director General of the Tanzania Commission for Science and Technology, thanked all the attendees, on behalf of the Government of the United Republic of Tanzania, for participating in the meeting. He emphasized that the most important policy message that had come out of the meeting was the importance of establishing an enabling and supportive ecosystem for innovation. He also informed participants of a related meeting, the Global 2013 Smart Partnership Dialogue, to be held in the United Republic of Tanzania from 28 June to 1 July. The International Dialogue, organized by the Smart Partnership Movement of the Commonwealth Partnership for Technology Management, would address ways to leverage technology for the socioeconomic well-being of Africa.

III. Key policy messages

32. The following key policy messages emerged from the discussions:

(a) Greater innovation throughout Africa would be the surest means of overcoming the technological, social, economic and environmental challenges associated with achieving the Millennium Development Goals;

(b) The transition to sustainable development will be highly dependent on the use of innovative technologies. Science, technology and innovation would also be effective for ensuring the balanced integration of the three dimensions of sustainable development;

(c) Science, technology and innovation should form an integral part of the post-2015 development framework;

(d) Stronger partnerships among stakeholders in all sectors are necessary to promote innovation as a means of achieving the Millennium Development Goals and sustainable development;

(e) Sound policy frameworks are needed at the national and regional levels in order to fully enable the development of innovative capacities;

(f) Universities, Governments and industries need to collaborate closely to nurture innovation with a view to increasing economic productivity; Governments, the private sector and civil society too need to form partnerships;

(g) Countries should ensure high-quality education and targeted investment in human resources, as these are the primary sources of innovation in all societies;

(h) Governments should provide financial, fiscal and regulatory incentives for activities that foster development and innovation. Such incentives should be aligned with appropriate regulatory frameworks and intellectual property rights that foster innovation and development;

(i) Regional support measures can include fostering regional linkages and partnerships among different stakeholders to capitalize on cross-border cooperation;

(j) Young people can be important innovators, yet many young innovators in the African region are not associated with institutions or universities. They must be better integrated in the innovation process;

(k) The Economic and Social Council should recognize the needs of African countries and issue a strong call for a coordinated approach to support Africa's endeavours to build innovation infrastructure and the capacities necessary to create domestic technology solutions;

(l) The Economic and Social Council must emphasize the contribution that science, technology and innovation can make to achieving sustainable development, particularly in the context of the post-2015 development framework;

(m) The Economic and Social Council could play an important role in galvanizing action for Africa's sustainable development. The ministerial declaration of the Council to be issued in July should include a strong call for supporting Africa's endeavours to build the innovation infrastructure and the capacity to create domestic technology solutions.